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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,312	04/05/2001	Hiroshi Wanibuchi	83020.0002	6572

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EXAMINER

TRAN, LY T

ART UNIT PAPER NUMBER

2853

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,312

Applicant(s)

WANIBUCHI ET AL.

Examiner

Ly T TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 4/10/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 6-23, 25-42 and 24/4, 6-23, 25-34 is/are allowed.
- 6) ☒ Claim(s) 2,3,5, 24/2,3,5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/10/03 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5, 3 and 24/5,3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki Tetsu (JP04-328521) in view of Ishikawa et al. USPN (5,503,287).

With respect to claim 5, Sasaki Tetsu discloses a cleaning device for cleaning a nozzle surface of an ink jet head comprising:

- A first wiping member for wiping the nozzle surface (Fig.1: element 27);
- A cleaner lever for supporting the first wiping member (Fig.1: element 24);

- A lever driving mechanism moving the first wiping member between a retracted position located away from the nozzle surface and a wiping position for wiping the nozzle surface (Fig.1: element 26a);
- A flat plate form second wiping member arranged within a moving path of the first wiping member so as to contact with the first wiping member (Fig.1: element 34);
- Wherein a tip end surface of the first wiping member first comes in substantially perpendicular contact with a side surface of the second wiping member and then moves across the side surface (Fig.7: element 27b, 34a).

With respect to claim 3, Sasaki Tetsu discloses the cleaner lever (24) has a third wiping member (fig.7: element 28), which is able to contact with the second wiping member while the cleaner lever is moving.

With respect to claim 24/ 3, 5, Sasaki Tetsu discloses:

- An ink jet head (Fig.1: element 24)
- A cleaning device which is arranged offsetting from a printing region of the ink jet head (Fig.1).

However, Sasaki Tetsu fails to teach the second wiper is formed of elastic.

Sasaki discloses the claimed invention except that the wiper is formed of absorbent instead of elastic. Ishikawa et al. shows that absorbent and elastic is an equivalent structure known in the art. Therefore, because absorbent and elastic were art recognized equivalents at the time the invention was made, one of ordinary skill in

the art would have found it obvious to substitute elastic for absorbent for the same purpose such as to absorbing and removing the unnecessary ink.

3. Claims 5, 2 and 24/5,2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. (USPN 5,798,775) in view of Ishikawa et al. USPN (5,503,287).

With respect to claim 5, Takahashi discloses a cleaning device for cleaning a nozzle surface of an ink jet head comprising:

- A first wiping member for wiping the nozzle surface (Fig.5: element 401);
- A cleaner lever for supporting the first wiping member (Fig.5: element 410);
- A lever driving mechanism moving the first wiping member between a retracted position located away from the nozzle surface and a wiping position for wiping the nozzle surface (Column 11: line 10-57);
- A flat plate form second wiping member arranged within a moving path of the first wiping member so as to contact with the first wiping member (Fig.5: element 104);
- Wherein a tip end surface of the first wiping member first comes in substantially perpendicular contact with a side surface of the second wiping member and then moves across the side surface (Fig.7A: element 104, 401)

With respect to claim 2, Takahashi et al discloses:

- The first wiping member (Fig.5: element 401) is designed to move between the retracted position and wiping position located above retracted position, by moving a cleaner lever (Fig.5: element 410)
- The second wiping member is arranged above the retracted position and below the wiping position (Fig.5: element 104)

With respect to claim 24/ 2, 5, Sasaki Takahashi et al discloses:

- An ink jet head (Fig.7A: element 1)
- A cleaning device which is arranged offsetting from a printing region of the ink jet head (Fig.5: element 401 is offset form the print head).

However, Takahashi fails to teach the second wiper is formed of elastic.

Takahashi discloses the claimed invention except that the wiper is formed of absorbent instead of elastic. Ishikawa et al. shows that absorbent and elastic is an equivalent structure known in the art. Therefore, because absorbent and elastic were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute elastic for absorbent for the same purpose such as to absorbing and removing the unnecessary ink.

Allowable Subject Matter

4. Claims 4, 6-23, 25-42 and 24/4, 6-23, 25-34 are allowed.

The primary reason for the allowance of claims 4, 25-34 and 24/4, 25-34 is the inclusion of an apparatus of a cleaning device comprising a combination of a first supporting member, second supporting member wherein a length of a portion of the

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second wiping member projecting from the first supporting member is greater than a length of a portion of the second wiping member projecting from the second supporting member. It is this structure found in each of the claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 6-13 and 24/6-13 is the inclusion of an apparatus of a cleaning device comprising a combination of a lever driving mechanism includes a friction type clutch lever which is frictionally engaged with one of gears constituting the gear train by means of a predetermined biasing force and is arranged coaxially with the gear and a tooth portion formed on the clutch lever which engages with the gear train when the clutch lever is in a predetermined rotational angular range. It is this structure found in each of the claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 14-20 and 24/14-20 is the inclusion of an apparatus of a cleaning device comprising a combination of a lever driving mechanism includes a friction type clutch lever which is frictionally engaged with one of gears constituting the gear train by means of a predetermined biasing force and is arranged coaxially with the gear and a tooth portion formed on the clutch lever which engages with the gear train when the clutch lever is in a predetermined rotational angular range. It is this structure found in each of the claims, as it is claimed in the

combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 21-23 and 24/21-23 is the inclusion of a combination of apparatus of a cleaning device comprising a lock lever for locking the ink jet head at a predetermined position and a second cam mechanism from converting rotation of clutch lever into movement of the lock lever. It is this structure found in each of the claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 35-42 is the inclusion of a cleaning device for cleaning a nozzle surface of an ink jet head comprising combination of a lever driving mechanism includes a friction type clutch lever which is frictionally engaged with one of gears constituting the gear train by means of a predetermined biasing force and is arranged coaxially with the gear and a tooth portion formed on the clutch lever which engages with the gear train when the clutch lever is in a predetermined rotational angular range. It is this structure found in each of the claims, as it is claimed in the combination, that has not been found, taught, or suggested by the prior art of record which makes these claims allowable over the prior art.

Response to Arguments

5. Applicant's arguments with respect to claims 5, 2 and 3 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T TRAN whose telephone number is 703-308-0752. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meier Stephen can be reached on 703-308-4896. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0967.



June 25, 2003



Stephen D. Meier
Primary Examiner